CLAIMS

What is claimed is:

1.   A method of on-line authentication, comprising the steps of:

receiving through a computer network a communication indicating that authentication is needed;

obtaining a first number that indicates how many fingerprints will be requested for authentication;

randomly selecting which fingerprints will be requested;

sending through the computer network one or more requests for entry of the randomly selected fingerprints;

receiving fingerprint data through the computer network in response to the one or more requests for entry of the randomly selected fingerprints; and

comparing the received fingerprint data to fingerprint data stored in a database.

2.   A method in accordance with claim 1, wherein the step of obtaining a first number comprises the step of:

randomly selecting the first number.

3.   A method in accordance with claim 1, wherein the step of obtaining a first number comprises the step of:

retrieving the first number from the database.

4.   A method in accordance with claim 1, wherein the first number is equal to or less than a total number of fingerprints stored in the database for a particular user.

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5. A method in accordance with claim 1, wherein the step of randomly selecting which fingerprints will be requested comprises the step of:

randomly selecting fingerprints from a total number of fingerprints stored in the database for a particular user.

6. A method in accordance with claim 1, further comprising the step of:

detecting through the computer network whether a client computer has a fingerprint reader.

7. A method in accordance with claim 1, further comprising the steps of:

receiving set-up data for a particular user through the computer network; and

storing the received set-up data in the database.

8. A method of setting up on-line authentication, comprising the steps of:

sending through the computer network a request for a total number that indicates how many fingerprints to hold for authentication;

receiving through the computer network the requested total number;

sending through the computer network one or more requests for entry of fingerprints;

receiving fingerprint data through the computer network in response to the one or more requests for entry of fingerprints;

assigning a number to each entered fingerprint that is consistent with a number intended by a user who entered the fingerprints; and

storing the received fingerprint data and assigned numbers in a database.

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9.   A method in accordance with claim 8, further comprising the step of:

sending through the computer network a request for a first number that indicates how many fingerprints will be requested for each authentication.

10.   A method in accordance with claim 8, further comprising the step of:

receiving through the computer network a first number that indicates how many fingerprints are to be requested for each authentication, wherein the first number is greater than or equal to zero and less than or equal to the total number.

11.   A method in accordance with claim 8, further comprising the step of:

receiving through the computer network an indication that a number is to be randomly selected to indicate how many fingerprints will be requested for each authentication.

12.   A method in accordance with claim 8, further comprising the step of:

sending through the computer network a request for whether username and password authentication should be enabled for client computers not having a fingerprint reader.

13.   A method in accordance with claim 8, further comprising the step of:

receiving through the computer network an indication that username and password authentication should be enabled for client computers not having a fingerprint reader.

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14. A system for providing on-line authentication, comprising:

a database configured to store fingerprint data and user set-up data;

a communication device configured to provide a connection to a computer network; and

a processor and a memory configured to receive through the computer network a communication indicating that authentication is needed, obtain a first number that indicates how many fingerprints will be requested for authentication, randomly select which fingerprints will be requested, send through the computer network one or more requests for entry of the randomly selected fingerprints, receive fingerprint data through the computer network in response to the one or more requests for entry of the randomly selected fingerprints, and compare the received fingerprint data to fingerprint data stored in the database.

15. A system in accordance with claim 14, wherein the processor and the memory are further configured to obtain the first number by randomly selecting the first number.

16. A system in accordance with claim 14, wherein the processor and the memory are further configured to obtain the first number by retrieving the first number from the database.

17. A system in accordance with claim 14, wherein the first number is equal to or less than a total number of fingerprints stored in the database for a particular user.

18.   A system in accordance with claim 14, wherein the processor and the memory are further configured to receive set-up data for a particular user through the computer network and store the set-up data in the database.

19.   A system in accordance with claim 14, wherein the processor and the memory are further configured to send through the computer network a request for a total number that indicates how many fingerprints to hold for authentication.

20.   A system in accordance with claim 14, wherein the processor and the memory are further configured to receive fingerprint data through the computer network in response to one or more requests for entry of fingerprints.

21.   A system in accordance with claim 20, wherein the processor and the memory are further configured to assign a number to each entered fingerprint that is consistent with a number intended by a user who entered the fingerprints, and store the received fingerprint data and assigned numbers in the database.